

ABSTRACTS**OFGS Ref: P/619-100****MBP Ref: P 2167 US****Applicant and Inventor: Gerhard KIRSTEIN****DE 2 239 579:**

Belts (11,12) run over a driving pulley (6, 7) and a driven pulley (5, 8). The belts are disengageable from the pulleys by changing the distance between the pulleys so that the tension of the belts is loosened and the belts slip over the pulleys.

In contrast, the invention uses a toothed belt drive and the wheels are gear wheels, accordingly. Further, according to the invention, a engagement and disengagement device is connected with the belt for lifting the belt radially from the first gearwheel from a meshed position into a demeshed position.

DE 129 371:

A belt (c) extends around two wheels (a) and (b). Wheel (b) includes a plurality of rotatable rollers (p), which are radially moveable and biased radially outward over the outward extend of wheel (b) by springs (t). A tension roller (d) is provided to tension the belt (c) and thereby urge the rollers (p) radially inward until the belt (c) contacts wheel (b) in order to drive the wheel (b). With the tension roller (d) retracted, the belt (c) is lifted over wheel (b) by rollers (p) in order not to drive wheel (b).

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FR 2 266 047:

This document relates to a device for engagement and disengagement of a belt (10) with and from a belt drive wheel (2,3), respectively. The wheel (2,3) comprises a resistance (8, 11, 12, 15, 19, 22, 23) in its interior, which prevents the belt from contacting engagement surfaces of the wheel as long as the belt (10) is not tensioned. By applying a tensile load upon the belt (10), said belt (10) is radially moveable against the force of the resistance until the belt (10) engages the engagement surfaces of the wheel (2,3). The resistance may be provided alternatively in the form of an elastic disc (8, 11, 12) as depicted in Fig. 1, 2, 3, 4, in the form of elastic plates (15) as depicted in Fig. 5, in the form of an elastic ring (20) as depicted in Fig. 6, in the form of elastic segments (22) as depicted in Fig. 7, in the form of an inflatable elastic membrane, as depicted in Fig. 8, in the form of fluid injectors (28) as depicted in Fig. 9, in the form of spring biased bolts (29) as depicted in Fig. 10, in the form of jointed sectors (32) as depicted in Fig. 11 and 11a, or in the form of rigid discs (33, 35) as depicted in Fig. 12 and 13, respectively. Either the resistance, as depicted in Fig. 1-11, or the belt, as depicted in Fig. 12, 13, is elastic.

Compared to the invention, FR 2 266 047 does not disclose the use of a toothed belt and toothed gear wheels.

DE 31 23 246 A1:

This document shows a pulley comprising two pulley discs (1, 2). Each disc (1,2) has an inclined belt engagement side surface (5, 6) and gear teeth (10, 11) at the radial inner end of said side surface (5, 6). Side surfaces of a belt 4 are in engagement with the engagement side surfaces (5, 6) of the two discs (1, 2), and radially inwardly facing gear teeth (13) of the belt (4) can be brought into engagement with the gear teeth (10, 11) of said discs (1, 2) by increasing the driving force which acts upon the belt. In that case, the driving force is not only transmitted through the friction force between the side surfaces of the belt and said side surfaces (5, 6) of the pulley discs but also through engagement of said teeth of the belt with the teeth of the pulley discs.

The belt is always in driving connection with the pulley, in contrast to the invention.